

Deploying the Force: What the Reserve Components Can Add

The Persian Gulf War and subsequent deployments of U.S. Army forces make it clear that units from the Reserve Components (RC) will play an important part in future operations. However, their specific role hinges on how quickly they can be ready for deployment. To gain empirical evidence on the speed with which RC units could be readied, RAND's Arroyo Center analyzed the deployment of over 600 support units during the Gulf War. The researchers also analyzed a notional scenario for a future Southwest Asia conflict to determine what allocation could reasonably be made between active Army and RC support units while still meeting deployment schedules. Results appear in Thomas F. Lippiatt et al., *Mobilization and Train-Up Times for Army Reserve Component Support Units*. Researchers found out that

- Among the many variables that affect deployment time, only three matter: mode of deployment, unit size, and branch.
- Most units deploying by air can be ready in 13 to 24 days.
- Typical units deploying by sea can have their equipment at the port in 18 days, with the people ready to go 6 to 9 days later.
- *If notified promptly*, the RC can meet the bulk of the support requirements for a large overseas operation.

DEPLOYING TO THE DESERT

Operation Desert Storm provided an unparalleled opportunity for rigorously examining the deployment process of RC units. Complete data were available for 606 support units, such as artillery, engineer, transportation, and military police units. Researchers carried out a

series of regression analyses of the elapsed time from call-up to several critical points in the deployment process, such as the time the unit was declared ready for deployment. Among the several factors considered, the analyses identified three as key: the unit's branch, its size (determined by weight), and the mode of deployment, air or sea. The results also provided a series of formulas that can be used to evaluate the likely preparation time for any particular type of unit.

By Air

The analysis divided the preparation process for units that deploy by air into the five segments shown in Figure 1. As the figure indicates, the first two phases were almost identical for all units. (Indeed, they were the same

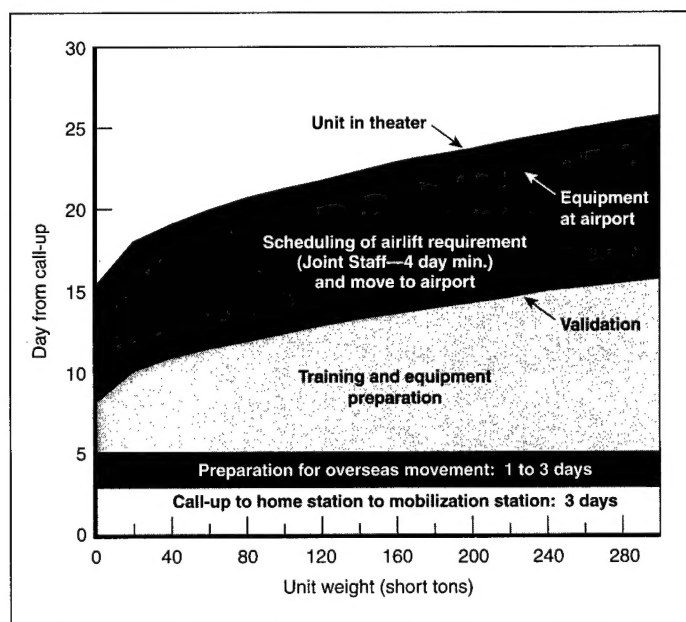


Figure 1—Estimated Average Preparation Time for RC Support Units Deploying by Air

for units deploying by sea as well.) As the figure also indicates, the time from call-up to validation (the point the unit was declared ready) varied from 8 to 16 days, depending on the weight of the unit. The period from validation to arrival at the airport of embarkation lasted another 5 to 8 days. Thus, air-deployed units alerted for Desert Storm were ready to go between 13 and 24 days after call-up, with the heavier units taking longer.

By Sea

Sea deployments involve a more complex process. Because of the time it takes to move equipment to the combat theater by ship, units are under pressure to deliver their equipment to the port before they have completed their training. Thus, they finish some of their postmobilization training after they have shipped their equipment, either by borrowing equipment or by concentrating on individual tasks. Analysis showed that the typical unit deploying by sea had its equipment at the port in 18 days. Units of some branches, such as medical, can be ready 2 to 4 days sooner, and others such as artillery require more time—about 8 additional days in the case of the artillery units.

PLANNING A FUTURE DEPLOYMENT

Arroyo Center researchers drew on these detailed deployment data to determine what portion of the support burden RC units could carry for a large operation in Southwest Asia. They specified a combat force and used Army models to determine the build-up rates of units in theater. Then, based on the formulas derived from the analysis of the Desert Storm data, the researchers determined whether a unit could be drawn from the RC. An RC unit was always selected if it could be ready in time; if not, the requirement was met with an active component (AC) unit. The results appear in Figure 2.

A key finding of this analysis is that RC units can provide most of the support for this scenario: 143,000

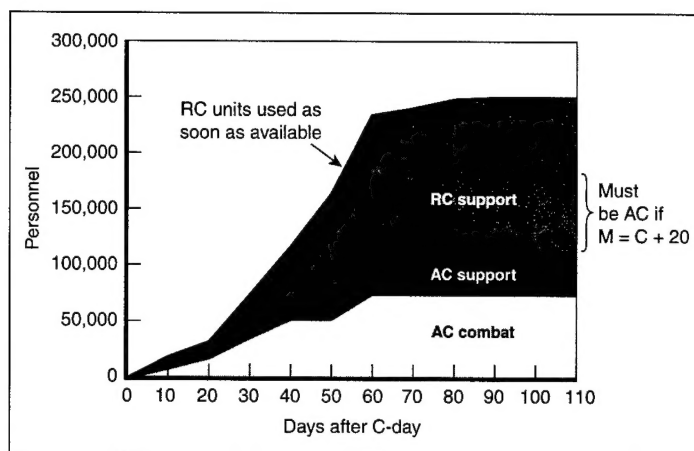


Figure 2—Division Between Active and Reserve Units in a Wartime Deployment

support personnel out of a requirement for 180,000. However, this is true only if the RC mobilize promptly. Delaying mobilization for 20 days—as happened in the Gulf War—boosts the requirement for AC support forces by nearly 70,000 soldiers. This difference is significant. In the former case, the AC has no difficulty providing its share of the support forces. But the AC does not have enough support units to meet the latter requirement. In that case, the nation would have no choice but to wait longer for RC units to become ready.

IMPLICATIONS

The results of this work have significant policy implications. The RC can fill much of the support requirement for a major conflict, but only if the RC units needed early are kept ready to deploy and only if they are mobilized quickly. The Army now depends on these RC units to move its large combat formations quickly enough to deter an aggressor. Therefore, the Army needs to hedge against various risks of delay by continuously monitoring the readiness of early-deploying RC support units and, if necessary, increasing their resource levels when readiness shortfalls arise.

RAND research briefs summarize research that has been more fully documented elsewhere. The research summarized in this brief was carried out in the RAND Arroyo Center; it is documented in Mobilization and Train-Up Times for Army Reserve Component Support Units, Thomas F. Lippiatt et al., MR-125-A, 1992, 56 pp., \$15.00, ISBN: 0-8330-1302-5; available from RAND Distribution Services (Telephone: toll free 877-584-8642; FAX: 310-451-6915; or Internet: order@rand.org). Abstracts of all RAND documents may be viewed on the World Wide Web (<http://www.rand.org>). Arroyo Center URL: <http://www.rand.org/organization/ard/>. Publications are distributed to the trade by NBN. RAND® is a registered trademark. RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis; its publications do not necessarily reflect the opinions or policies of its research sponsors.

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